



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,522	08/27/2003	Hirofumi Muratani	241983US2SRD	3965
22850	7590	03/18/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER WANG, CLAIRE X	
			ART UNIT	PAPER NUMBER
			2624	
			NOTIFICATION DATE	DELIVERY MODE
			03/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/648,522	Applicant(s) MURATANI, HIROFUMI	
	Examiner CLAIRE WANG	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2007 and 12/3/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 24 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10, 11, 13, 23, 25 and 27 is/are rejected.
- 7) ☒ Claim(s) 12 and 14-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' response to the last Office Action, filed on July 2nd, 2007 and November 1st, 2007 has been entered and made of record.
2. In view of the Applicant's arguments and amendments, the claim objections (claim 23) and rejection under 35 U.S.C. 112 rejection (claims 10-23, 25 and 27) are expressly withdrawn.

Response to Arguments

3. Applicant's arguments filed July 2nd, 2007 have been fully considered but they are not persuasive.

a. In response to applicant's argument that the references fail to show certain features of applicant's invention, (i.e., "Malik fails to teach a method of specifying at least one identification information item embedded in legal copies based on the range symbols in accordance with the ranks of the embedded codes"), it is noted that the features upon which applicant relies (i.e., specifying at least one identification information item embedded in legal copies based on the range symbols in accordance with the ranks of the embedded codes) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

b. In response to applicant's argument that "Yacobi and Malik fail to teach or suggest an acquisition unit configured to ... arrange the symbols in accordance with the ranks of the embedded codes, and acquire a first symbol sequence of symbol sequences each of which includes a plurality of the symbols; and a specifying unit configured to specify at least one of the identification information items embedded in the legal copies, based on ... the first symbol sequence." It is noted that Yacobi teaches a fingerprinting technology for protecting digital goods by detecting collusion attacks and identifying the participating colluders (Paragraph [0002], lines 3-6), and obtaining a media signal suspected of being modified (410 Fig. 4); Also determining whether the suspected media signal has fingerprints of colluders (416 Fig. 4) where the term "fingerprints" refers to unique entity identifier ([0021], line 1), obtaining watermark carriers from carrier index (414 Fig. 4) and obtaining the original marked media signal (412 Fig. 4). Malik teaches a fingerprinting apparatus for the purpose of watermarking (Col. 1, lines 20-26). Said fingerprinting apparatus generates Representative Master Key (RMK) which can be identified using tuple in the form of (x, y). The term x can range from 1 to n and the term y can range from 1 to m (Col. 9, lines 11-14). Thus the combination of Yacobi and Malik teaches the claimed invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 10, 11, 13, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yacobi et al. (US 2005/0086486 hereinafter "Yacobi") in view of Malik et al. (US 7,068,823 hereinafter "Malik").

As to claim 10, Yacobi teaches a digital watermark analysis apparatus for specifying at least one of a plurality of identification information items embedded as a plurality of watermark information items in a plurality of legal copies of digital contents used for collusive attacks, from a plurality of illegal copies of the digital contents obtained by collusive attacks made against the legal copies (fingerprinting technology for protecting digital goods by detecting collusion attacks and identifying the participating colluders; Paragraph [0002], lines 3-6), the digital watermark analysis apparatus comprising: an extraction unit configured to extract a plurality of embedded codes (obtaining a media signal suspected of being modified; 410 Fig. 4), each of the ranks being uniquely numbered among each of the symbol sequences (determining whether the suspected media signal has fingerprints of colluders; 416 Fig. 4) (where the term "fingerprints" refers to unique entity identifier; [0021], line 1); and a specifying

unit configured to specify at least one of the identification information items embedded in the legal copies (obtaining watermark carriers from carrier index; 414 Fig. 4), based on a plurality of second symbol sequences uniquely assigned to the identification information items and the first symbol sequence (obtain original marked media signal; 412 Fig. 4). However, Yacobi does not teach the fingerprint extracted from the suspected copy includes ranks; an acquisition unit configured to acquire a plurality of symbols corresponding to the embedded codes and arrange the symbols in accordance with the ranks of the embedded codes, and acquire a first symbol sequence of symbol sequences each of which includes a plurality of the symbols.

Malik teaches a fingerprinting apparatus for the purpose of watermarking (Col. 1, lines 20-26). Said fingerprinting apparatus generates Representative Master Key (RMK) which can be identified using tuple in the form of (x, y) . The term x can range from 1 to n and the term y can range from 1 to m (Col. 9, lines 11-14). RMK has one or more Key Sets (KSs), which can be arranged according to the tuple order in ascending order (Col. 9, lines 36-40). Thus, Malik's fingerprinting apparatus that arranges KSs in ascending order reads on the claimed "ranking the embedded codes in order". Therefore, it would have been obvious for one ordinarily skilled in the art at the time the invention was made to combine Yacobi's collusion-resistant watermarking and fingerprinting apparatus with Malik's coding fingerprinting apparatus in order to protect copyright holders against the problems associated with pirated copies (Malik Col. 1, lines 23-24).

As to claim 11, Yacobi and Malik teach wherein the specifying unit specifies at least one of the identification information items based on the second symbol sequences each of which include a plurality of symbols including the ranks (RMK has one or more Key Sets (KSs), which can be arranged according to the tuple order in ascending order; Malik Col. 9, lines 36-40); and the acquisition unit acquires a plurality of the symbols including the ranks, the symbols corresponding to the embedded codes (RMK has one or more Key Sets (KSs), which can be arranged according to the tuple order in ascending order; Malik Col. 9, lines 36-40), the embedded codes being embedded in the legal copies (obtaining original marked media signal; Yacobi 412 Fig. 4).

As to claim 13, Yacobi and Malik teach wherein the extraction unit extracts several of the embedded codes which are generated in a random number sequence (pseudo-random; Malik Col. 2, line 67) such that the embedded codes corresponding to the symbols including a same rank in the symbol sequences include one of no cross-correlation and a very low cross-correlation (Fig. 3 shows the generation of unique ID using master keys); and the extraction unit obtains, in units of the ranks, cross-correlation between embedded codes corresponding to the symbols contained in the first symbol sequence, and obtains one of the embedded codes which includes a maximum cross-correlation (compare matches with threshold; 922 Fig. 9).

As to claim 25, it is the method claim of claim 1. Please see claim 1 for detail analysis.

As to claim 27, it is the program claim of claim 1. Please see claim 1 for detail analysis.

As to claim 23, Yacobi teaches wherein the identification information items include unique information assigned to users who provide the legal copies (312 Fig. 3).

Allowable Subject Matter

3. Claims 12, 14-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAIRE WANG whose telephone number is (571)270-1051. The examiner can normally be reached on Mid-day flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/648,522
Art Unit: 2624

Page 10

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew C Bella/
Supervisory Patent Examiner, Art
Unit 2624

Claire Wang
03/02/2008